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THE EFFECTIVENESS OF TEACHING BEGINNING READING WITH THE INITIAL TEACHING ALPHABET (I/T/A), A FINAL REPORT.

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AN EXPERIMENTAL GROUP OF 461 CHILDREN WAS TAUGHT TO READ WITH THE INITIAL TEACHING ALPHABET (I/T/A) BEGINNING IN KINDERGARTEN AND WAS READING TRADITIONAL ORTHOGRAPHY (T/O) MATERIALS BY THE END OF THE SECOND GRADE. THE CONTROL GROUP INCLUDED 462 CHILDREN WHO WERE TAUGHT TRADITIONAL ORTHOGRAPHY IN A PROGRAM CENTERED AROUND CONVENTIONAL BASAL READING SERIES. AT THE END OF THE SECOND GRADE, BOTH GROUPS WERE ADMINISTERED THE PARAGRAPH MEANING, WORD MEANING, AND SPELLING SECTIONS OF THE STANFORD ACHIEVEMENT TEST, PRIMARY, FORM K. A STATISTICAL COMPARISON OF SCORES ON EACH TEST SECTION WAS MADE. THIS WAS THE SECOND STEP IN A LONGITUDINAL INVESTIGATION OF THE EFFECTS OF I/T/A. THE FIRST COMPARISON WAS MADE AT THE END OF GRADE ONE. AFTER FIRST GRADE, THE I/T/A GROUP DID SIGNIFICANTLY BETTER ONLY IN SPELLING WHEN EITHER I/T/A OR T/O ANSWERS WERE ACCEPTABLE. AT THE END OF GRADE TWO, THERE WERE NO SIGNIFICANT DIFFERENCES IN THE THREE AREAS. THE I/T/A METHOD APPEARED TO BE BEST SUITED FOR ABOVE AVERAGE CHILDREN. ALTHOUGH STAFF OPINION WAS NOT UNANIMOUS, IT WAS RECOMMENDED THAT THE PROGRAM BE DISCONTINUED. TWELVE REASONS FOR THIS RECOMMENDATION ARE GIVEN. STATISTICS ARE SUMMARIZED IN FOUR TABLES. (RH)

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THE EFFECTIVENESS OF TEACHING BEGINNING READING WITH THE INITIAL TEACHING ALPHABET (i/t/a)

A Final Report

January, 1967

Freeport Public Schools
Freeport, New York

11520

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BACKGROUND

The Freeport Schools adopted the Initial Teaching Alphabet (i/t/a) as a regular curriculum practice during the spring of 1964. The program was introduced in all kindergartens in the school district, except at the Atkinson School where an experiment involving the "talking" typewriter was in progress. During first grade many children made a natural transition to traditional orthography (t.o.). By the end of the second grade, however, all children were reading t.o. either as a result of making the transition naturally, or in some cases, as a result of an arbitrary change-over by their teachers. At this time the original i/t/a group is in third grade.

Objective and subjective measures were used to evaluate the effectiveness of i/t/a. When the first group finished first grade the Stanford Achievement Test was administered and results were compared with those of first grade children in a regular t. o. program the year before. (Details of procedures, results and conclusions can be found in an earlier report [1].) In brief, the findings indicated no significant differences between i/t/a and t.o. groups on the paragraph meaning and word meaning sections, but the i/t/a group did significantly better in spelling when either i/t/a or t. o. answers were accepted as correct responses. It should be noted that the i/t/a group took the Stanford Achievement Test in t.o. because an i/t/a edition was not available at that

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[1] Samuel S. Shohen, "The Effectiveness of Teaching Beginning Reading with the Initial Teaching Alphabet (i/t/a)," Freeport Public Schools, March, 1966. (Mimeographed.)

time. This factor might have hampered the i/t/a group's performance.

During the year the i/t/a children were in second grade a poll was taken of first and second grade teachers on their subjective appraisal of the new medium.(Details can be found in another earlier report.[1]) The group's reaction was divided almost equally; those favoring i/t/a stressed its influence upon word attack skills and creative writing ability; those against emphasized the need to unlearn i/t/a for t.o., especially in the spelling area.

The poll indicated diametrically opposite views on certain points; for example: several teachers believed the i/t/a basic readers were more interesting to children than traditional series; yet others thought the i/t/a books were above the sophistication and concept development of first grade youngsters. The vast majority of teachers agreed, however, that i/t/a was more effective with "fast"children than with "slow" ones.

Since objective evidence at the end of first grade did not indicate any negative influences of i/t/a, and although teacher-opinion was mixed, a decision was made to continue the program for another year under close examination. The achievement of the original i/t/a group at the end of second grade was considered an important key to further decisions. In addition, subjective appraisals by administrators and teachers would become more meaningful as experience with the program increased.

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[1] Samuel S. Shohen, "Using the Initial Teaching Alphabet (i/t/a) A Subjective Evaluation," Freeport Public Schools, May, 1966. (Mimeographed.)

The remainder of this report details the procedures and results of the second grade testing as well as the findings of another poll taken earlier this month. Also included are test results of last year's i/t/a first first grades who were evaluated on a test written in i/t/a. At the end of the report a recommendation is made on whether Freeport should continue the i/t/a program.

SECOND GRADE STUDY

Problem

The major purpose of this study was to compare the effectiveness of the Initial Teaching Alphabet (i/t/a) with traditional orthography (t.o.) for teaching beginning reading. To examine this problem a standardized reading and spelling test, written in traditional orthography, was administered to a large group (462) of second grade children who were taught t.o. in first and second grades and to a large group (461) of second grade children who were taught i/t/a in first grade and were all reading t.o. materials by the end of second.

In terms of standardized test terminology the following specific questions were examined:

1. Is there a signifcant difference in paragraph meaning performance between i/t/a and t.o. children?
2. Is there a significant difference in word meaning performance between i/t/a and t.o. children?
3. Is there a significant difference in spelling performance between i/t/a and t.o. children?

This study was considered the second step in a longitudinal investigation of the effects of i/t/a. The first step was completed when the two groups were compared at the end of first grade. Results at that time revealed no significant differences in paragraph meaning or word meaning, but there was a significant difference in spelling for the i/t/a group when either i/t/a or t.o. answers were accepted as correct responses. A questionable variable was introduced in the first step when the i/t/a group had to be evaluated with a test written in t.o.

Limitations

Population: The control (t.o.) group comprised 462 children who were in second grade in 1964-65. They were taught t.o. in a reading program centered around conventinnal basal reading series.[1]

The experimental (i/t/a) group included 461 children who were in second grade in 1965-66. They were introduced to i/t/a in kindergarten and were all reading regular t.o. materials by the end of second grade. Some made the transition to i/t/a naturally; others were switched arbitrarily by their teachers.

Additional information on these groups follows:

1. Source: Both groups of children were drawn from the Archer Street, Bayview Avenue, Columbus Avenue and Giblyn elementary schools of the Public Schools of Freeport, Long Island, New York.

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[1] Harper Row; Scott Foresman; Holt Rinehart and Winston; and Ginn. (Series used varied from school to school and teacher to teacher.)

2. Age: The mean chronological age of both groups was 8-0.

3. Sex: t.o. group -- 244 boys, 218 girls
i/t/a group-- 239 boys, 222 girls

4. Race: In the t.o. group approximately seventy-six per cent were Caucasian, twenty-four per cent were Negro. In the i/t/a group approximately seventy-four per cent were Caucasian, twenty-six per cent were Negro.

Teachers: In 1964-65 seventeen teachers taught the control (t.o.) group. Eleven of these teachers had only one year of experience. The experimental (i/t/a) group in 1965-66 was taught by seventeen teachers of whom only one was teaching for the first year; four members of this group were first grade i/t/a teachers the year before.

Test: The Paragraph Meaning, Word Meaning, and Spelling sections of the Stanford Achievement Test, Primary, Form K[1], were administered to both t.o. and i/t/a children. The test was written in traditional orthography.

.Statistical Evaluation: The significance of the difference between raw score means was used to compare the performances of the two groups.

(Note: The totals and percentages listed above are different from those reported when the groups were compared at the end of the first grade. The numbers reflect net changes in both groups as a result of children entering and leaving the school district. Since both groups were affected similarly the influence upon the experimental design were considered negligible.)

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[1] Harcourt, Brace and World, Inc.

Procedures

1. During the first week of June, 1965, the Paragraph Meaning, Word Meaning and Spelling sections of the Stanford Achievement Test, Primary, Form K were administered to the entire second grade population, which had been taught how to read in t.o. The Atkinson School results were eliminated because there was no need to compare scores in this study with the following year's second grade which did not have i/t/a in first grade. Classroom teachers marked the tests and a secretary collated the raw data. Complete scores were available on 462 children, who became the control (t.o.) group.

2. During the first week of June, 1966, the Paragraph Meaning, Word Meaning and Spelling sections of the Stanford Achievement Test, Primary, Form K were administered to the entire second grade population. Classroom teachers marked the tests and the Data Processing Department collated the information. Since the Atkinson School children did not have i/t/a in first grade their results were eliminated, leaving an experimental (i/t/a) group of 461 children.

3. A statistical comparison of scores on each test section was made:

   a. Only raw score means and standard deviations were calculated because raw scores are considered more reliable for statistical interpretations than grade scores, which are unequal measurement units. Although means and standard deviations were determined for each school, this information was not interpreted because the populations were small compared to the totals for

all schools and supporting normative data was lacking.

b. Critical ratios, t's were calculated to determine the significance of the difference between raw score means of the total control and experimental groups.

Results

The results are reported in Table 1 and then discussed according to the specific questions asked at the end of second grade on the effectiveness of i/t/a compared to t.o. for teaching beginning reading.

TABLE 1

SUMMARY OF RAW SCORE MEANS, STANDARD DEVIATIONS AND t TESTS FOR ALL SCHOOLS AT END OF SECOND GRADE *

Control Group (t.o.) Second Grade, June 1965
Experimental Group (i/t/a) Second Grade, June 1966

Stanford Achievement Test Primary, Form K**	t.o.(N=462)		i/t/a/ (N=461)		t
	M	SD	M	SD	
Paragraph Meaning	28	11.4	29	11.7	0.1
Word Meaning	23	9.4	24	10.2	0.1
Spelling	23	6.1	23	6.7	0.0

* Atkinson results not included

**Test in t.o.

1. Question one: <u>Paragraph meaning performance</u>

   A. one point mean difference was found in favor of the i/t/a group, but the t test indicated this difference happened by chance.

2. Question two: <u>Word meaning performance</u>

   Again the one point mean difference in favor of the i/t/a group was a chance occurrence.

3. Question three: <u>Spelling performance</u>

   There was no mean difference between the two groups in spelling

Results for each school are reported in Table 2. Since the populations were fractions of the total group studied, and I.Q. and other variable data were unavailable, no legitimate interpretations can be made; in other words: for samplings not randomly selected, factors other than i/t/a can create differences.

<u>Conclusions</u>

Within the limitations of a population of 462 t.o. and 461 i/t/a second grade children and the reliability and validity of the sections of the Stanford Achievement Test, Primary, Form K, the following qualified conclusioms can be made concerning the effectiveness of the Initial Teaching Alphabet (i/t/a) compared to traditional orthography (t.o.) for teaching beginning reading in terms of the original questions asked:

TABLE 2

SUMMARY OF RAW SCORE MEANS AND STANDARD DEVIATIONS
FOR EACH SCHOOL AT END OF SECOND GRADE

Control Group (t.o.) Second Grade, June 1965
Experimental Group (i/t/a) Second Grade, June 1966

Stanford Achievement Test Primary Form K*	N	Paragraph Meaning		Word Meaning		Spelling	
		M	SD	M	SD	M	SD
Archer							
t.o.	109	31	10.1	26	7.9	25	4.8
i/t/a	99	31	9.5	27	8.5	25	5.4
Bayview							
t.o.	123	31	10.9	27	8.4	24	5.1
i/t/a	142	33	10.6	28	8.2	25	5.4
Columbus							
t.o.	128	21	10.7	17	9.3	19	7.1
i/t/a	118	19	11.0	16	9.4	16	7.2
Giblyn							
t.o.	102	30	10.1	25	8.3	24	5.0
i/t/a	102	31	10.2	27	9.2	25	5.0
All Schools (except Atkinson)							
t.o.	462	28	11.4	23	9.4	23	6.1
i/t/a	461	29	11.7	24	10.2	23	6.7
Atkinson**							
t.o. (1965)	79	34	9.9	28	8.7	25	5.2
t.o. (1966)	83	32	12.6	30	10.6	24	6.6

* Test in t.o.
** No i/t/a in first grade

1. Question one: There is no significant difference in paragraph meaning performance between i/t/a and t.o. children.
2. Question two: There is no significant difference in word meaning performance between i/t/a and t.o. children.
3. Question three: There is no significant difference in spelling performance between i/t/a and t.o. children.

ADDITIONAL TEST DATA

To provide as much objective information as possible to help in determining the effectiveness of i/t/a, the performance of the 1965-66 first grades was examined. These children had been introduced to i/t/a in kindergarten and, by the end of first grade, most of the group were working in t.o. materials. During the first week of June, 1966 the Stanford Achievement Test, Primary I Battery, Form W,[1] written in i/t/a, was administered. Complete results were available on 489 children, including the Atkinson School, which started its i/t/a program with the 1964-65 kindergartens. Table 3 summarizes the findings in grade score means.

Caution must be exercised in analyzing these results, especially in comparing schools, because I. Q. and other variable data are not included, however, two conclusions can be drawn when combined results of all schools are examined:

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[1] Harcourt, Brace and World, Inc.

TABLE 3

SUMMARY OF GRADE SCORE MEANS
ON TEST WRITTEN IN i/t/a
FIRST GRADES, JUNE 1966

Stanford Achievement Test, Primary I Battery Form W	N	Word Reading	Paragraph Meaning	Vocabulary	Spelling*	Word Study Skills
Archer	104	2.1	1.8	2.2	2.0	2.7
Atkinson	65	2.1	1.9	2.4	2.2	3.0
Bayview	111	2.4	2.0	2.1	2.1	3.0
Columbus	120	1.8	1.6	1.9	1.7	2.2
Giblyn	89	2.3	2.0	2.6	2.3	3.0
All Schools	489	2.1	1.8	2.2	2.0	2.7

* Either i/t/a or t.o. spellings accepted as correct responses.

1. Performance in paragraph meaning is decidedly lower than other areas, suggesting that i/t/a does not increase comprehension in contextual settings.
2. Performance in word study skills, a test of aspects of phonic ability, is exceptionally better than other areas, suggesting that i/t/a children develop strong skill in recognizing sound-symbol relationships.

RESULTS OF STAFF POLL

A staff poll was conducted at the beginning of January, 1967, to determine personal reactions to i/t/a. The elementary school principals, helping teachers, first grade teachers and second grade teachers were asked: "Should Freeport continue the i/t/a program next year?" Responses by forty-six staff members are summarized in Table 4.

TABLE 4
SUMMARY OF STAFF POLL
January 1967

Should Freeport continue the i/t/a program next year?		
Yes	23*	50%
No	19	41%
Undecided	4	9%
	46	100%

* 8 people qualified answers.

Half of the staff members polled believed Freeport should continue the program; however, eight of these twenty-three people qualified their answers by suggesting i/t/a be used with "better" students only -- they thought i/t/a hindered "slow-moving" children. There were six second grade teachers in one school, nevertheless, who saw "slow-moving" youngsters profiting from i/t/a.

The reasons given for answers were similar to those given throughout the i/t/a period in Freeport. Among reasons for continuing i/t/a were:

1. Consistency of medium
2. More and better creative writing
3. Improved work attack skills
4. More interesting stories in basic readers
5. Increased independent reading
6. Greater confidence

Among reasons for discontinuing i/t/a were:

1. Overdependency on "sounding out" approach to word recognition.
2. Sound discrimination difficult for "slow" learners
3. Poor fluency; children tend to read orally word-by-word
4. Basic reader stories beyond sophistication and concept development of first graders
5. More problems created for transient children
6. Negative influence on t.o. spelling
7. Need to unlearn i/t/a for t.o.

The results of the poll were analyzed further. A tally was made of responses by six staff members having fifteen or more years of experience teaching first grade reading. To this tally was added the responses of two Reading Department members who also had taught many years in first grade. Two veteran staff members wanted i/t/a continued; five wanted it discontinued, and one said it did not make any difference.

SUMMARY OF FINDINGS

Up to this point this paper has reported the most recent objective and subjective findings concerning the effectiveness of Freeport's i/t/a program. Objective evidence at the end of second grade indicates there is no significant difference between i/t/a and t.o. on a standardized test of paragraph meaning, word meaning and spelling. Staff opinion is divided, with the majority of veteran first grade staff members recommending the discontinuance of the i/t/a program.

RECOMMENDATIONS

This researcher recommends <u>discontinuing the Freeport i/t/a program.</u> His reasons are based upon a careful appraisal of the findings in this report, the findings in past reports, his extensive training and experience as a reading specialist, and his understanding of the nature and possible future of the Freeport Public Schools.

Reasons include:

1. Objective test results indicate no significant difference between i/t/a and t.o.
2. Only one-half of the staff recommends continuing the program, with several people qualifying their approval in one form or another.
3. Although i/t/a children develop excellent word analysis ability, their comprehension does not seem to be enhanced and their reading rate is slowed down because they are placed in materials where "new" words are introduced too rapidly. The successful unlocking of words, but the laborious process involved, might eventually lead to negative attitudes toward reading.
4. Although i/t/a results in wonderful creative writing, it is possible that similar results might be found in t.o. if teachers did not insist on correct t.o. spelling during first grade.
5. A vast majority of teachers believe i/t/a does not work with the "slow" child; however, this researcher believes, in many cases, the problem lies in reading readiness weaknesses.
6. There is still a lack of good i/t/a basal materials, supplementary books and teaching aids.
7. Additional in-service training in i/t/a is necessary for new teachers.

8. Many parents attribute their children's reading success to i/t/a, while those parents having children experiencing difficulty blame i/t/a. Thus parents get a distorted picture of the reading program.
9. Classroom organizational problems increase when part of the group has made the transition to t.o. and part of the group is still in i/t/a.
10. i/t/a, with its consistent sound-symbol relationships often results in an overemphasis of phonics teaching and little emphasis on other word analysis approaches that are necessary for transition and progress in t.o.
11. An increasing number of transient children are entering the Freeport Schools. Although i/t/a probably does not hinder the youngsters who stay a few weeks and then leave, it is difficult to test this observation. Furthermore, additional burdens are placed on teachers when children taught t.o. enter an i/t/a class.
12. There is no indication i/t/a is going to replace t.o. in the near future in the English-speaking world; children will still have to learn to read traditional orthography.

If the Freeport Administration accepts the recommendation to discontinue the i/t/a program, these suggestions should be considered:

1. Children presently in i/t/a should be allowed to make the natural transition to t.o., which in some cases

might not take place until second or third grade.

2. Kindergarten teachers should immediately change i/t/a to t.o. for their labels, captions, experience charts and other printed materials in their classrooms.
3. Every effort should be made to improve the reading readiness program. This is very important in Freeport where the number of culturally disadvantaged children is rapidly increasing. Possibilities should be explored for developing extended readiness classes that go beyond kindergarten into first and second grades.
4. Staff members and the community should be informed of the findings in this report.

CONCLUSION

Although i/t/a presented promising possibilities in the beginning to Freeport administrators and teachers, experience has failed to show outstanding results. In the final analysis, if teachers do a good job in teaching reading it does not make a difference whether i/t/a or t.o. is used. But since we live in a "t.o. world" we should use traditional orthography for the written medium and follow our understanding of child development to create a reading program based upon modern psychological and pedogogical principles.